

ABSTRACT OF THE DISCLOSURE

A light beam is directed towards a surface along a direction normal to the surface. The surface is caused to move so that the beam scans the surface along a spiral path. An ellipsoidal mirror is placed with its axis along the surface normal to collect light scattered by the surface and any anomalies at the surface at collection angles away from the surface normal. In some applications, a lens arrangement with its axis along the surface normal is also used to collect the light scattered by the surface and any anomalies. The light scattered by the mirror and lenses may be directed to the same or different detectors. Preferably light scattered by the surface within a first range of collection angles from the axis is detected by a first detector and light scattered by the surface within a second range of collection angles from the axis is detected by a second detector. The two ranges of collection angles are different, with one detector optimized to detect scattering from large particles and defects and the other detector optimized to detect light from small particles and defects.